

Pragati OffSet Pvt. Ltd.

*Jürgen Schönhut Memorial
CIP4 International Print Production Innovation Award*

**2008 Winner
For
Best Process Automation Implementation — Emerging Markets**

Pragati OffSet Pvt. Ltd., India

Overview

This presentation looks at the adoption of new technology by Pragati Offset from India in order to streamline production processes, improve control and reduce errors. Creating a more efficient workflow to better serve customers and reduce overheads. It looks at various options, the testing and final implementation of the new processes.

Background

Pragati grew using a home grown MIS system. This served the following tasks

- Order Entry
- Estimation
- Order Confirmation
- Manual Job Scheduling
- Operation progress
- Order Delivery
- Billing

The planning part was done offline from the MIS using hand-drawn signatures and attaching them to job cards that were passed down the line of production. The output operators used these drawings as the baseline for the imposition activities. Jobs were keyed in once in the MIS, planned by hand and then keyed in again for production output. Changes in job specification or production processes such as stock or plant equipment meant time consuming changes to the signatures. Errors could occur in the manual process involved and were costly, and the whole process was inefficient.

Objectives

There were three main objectives. First was to move the job planning process from a manual hand drawn task to a computer. This was to give greater efficiency in production and assist the planner by having some built in parameters and reducing manual errors. The second was to reduce/eliminate the re-keying of information from the planners by the imposition operators. Thirdly was to have job information entered into the MIS/ERP and have that automatically passed down to the job planners without having to re-key the information so they can focus on planning instead of data entry.

Methodology

Pragati initially purchased Kodak Upfront in order to satisfy the computer driven job planning part. This was chosen to work with their existing Brisque Workflow back in 2001 (a Creo Product at the time). But due to a number of reasons including a slightly tougher learning curve and the requirement to make templates while most of jobs are non standard sizes, the implementation was unsuccessful.

As there was no further development planned on the Brisque, Pragati upgraded/replaced this with an Esko Workflow in 2004. Esko was chosen due to its strength in the packaging market and the fact that Pragati's packaging side of the business was growing. The Esko Workflow offered many desirable features such as support for multiple channels and last minute editability. Another reason for the decision was due to the fact that the imposition product Fast Impose could take JDF input. Going down the JDF route was desirable due to the common format and interoperability in the workflow.

In 2006 Pragati saw a demo of Metrix while visiting IPEX and was impressed with its usability and functionality. It was decided to trial the software.

Implementation

Trials of Metrix went well and it was decided to implement it in early 2007. The initial goal of using Metrix was to computerize the sheet planning of jobs. This was achieved in a relatively short space of time and the planners were very comfortable with the software. Within a couple of months jobs were being planned with ease.

The second goal of automating the imposition process using data from Metrix and importing it into the Esko Workflow took a little longer to implement. With assistance from both Esko Artworks and LithoTechnics to ensure proper handshaking using JDF job data from Metrix and sending it to Esko, this has largely been achieved. There is still the occasional issue that crops up but these get solved with on going support from both companies.

The final goal to reduce/eliminate the re-keying of data from MIS to Planning is yet to be realised. It has been pushed back due to the decision in mid 2007 to move from their home grown MIS to the SAP R/3 ERP system. Tailoring the SAP estimating and production process to suit the printing industry was quite a challenge. After a 7 month implementation plan Pragati finally moved all MIS control to their new SAP ERP system.

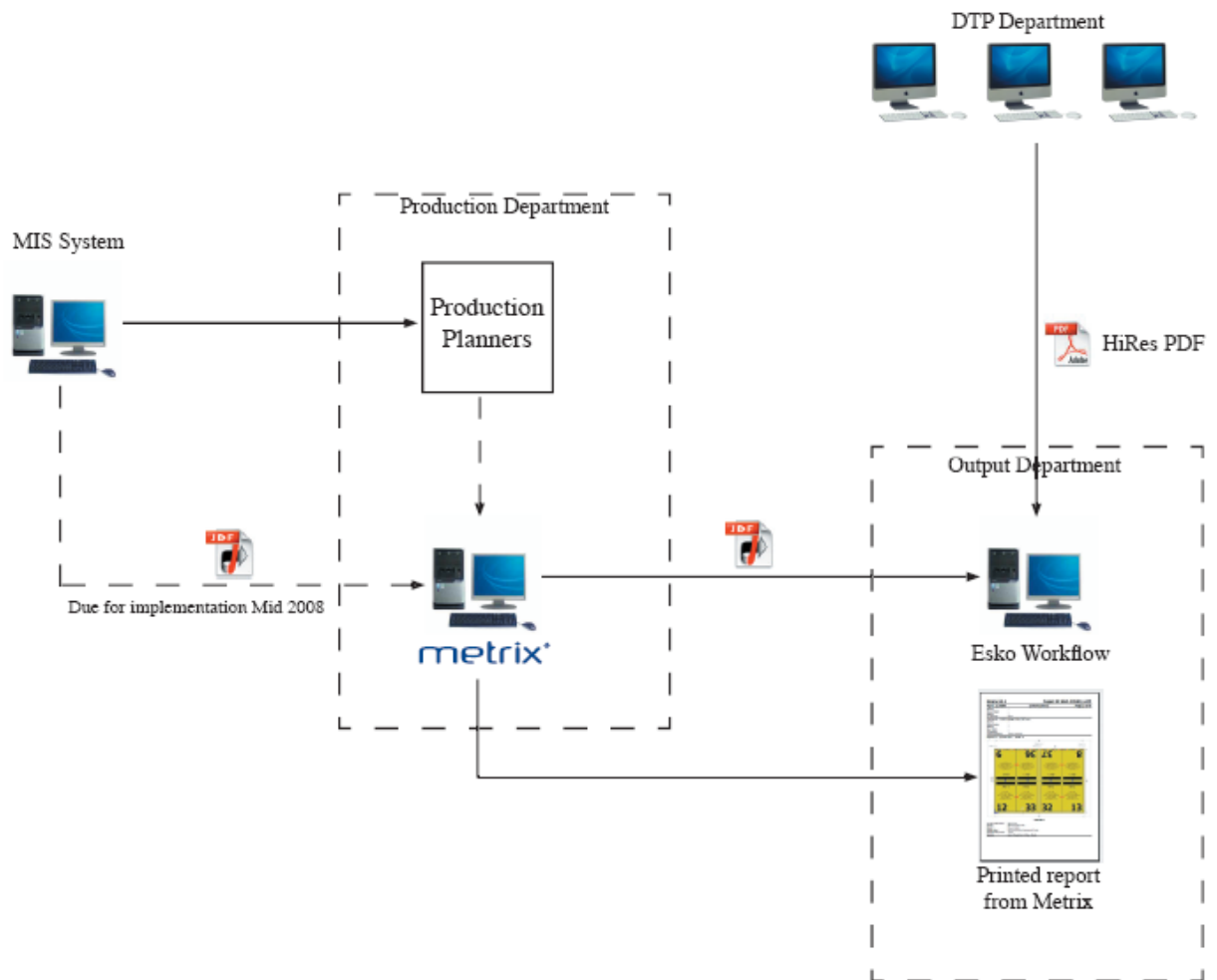
The next stage currently underway is to achieve the final stage in automation process and export MXML (Metrix XML format) from the ERP direct into Metrix. MXML would contain all customer, job and layout information keyed into the ERP allowing the planners to plan job without having to key in data again, then export JDF to the Esko Workflow. Final implementation is expected to be in place by mid 2008.

Resulting Workflow (current)

The attached diagram 1 gives an overall view of Pragati’s workflow. The process is described as follows.

- Job keyed into estimation system (ERP) and passed to the production planning department.
- Production planners choose the optimum sheet size for the job.
- Production methodology is keyed into Metrix where imposition plans are generated with correct laps, bleeds and gaps.
- Metrix exports JDF stripping data and Produces Printed reports which are sent down to the Output Department.
- Approved high resolution PDF’s sent from the DTP department are merged with the imposition plan at the Esko Workflow and the completed job is output.

Workflow Diagram - Pragati Offset Pvt. Ltd.



Outstanding Issues

Still to implement is the automatic import of job data from the ERP to Metrix which would eliminate the final duplicated keying in effort. This should be done by mid 2008.

Time Line

2001 Purchase Kodak Upfront and begin work. Implementation not successful and product dropped.

2004 Replaced Scitex Brisque with Ekso Workflow

2006 Demonstration on Metrix from LithoTechnics at IPEX

2007 (early) Implementation of Metrix version 2 to send JDF to Esko

2007 (mid) Initial implementation of SAP ERP

2008 (early) ERP transition complete

2008 (mid) Implementation of job data from ERP direct into Metrix.

Benefits Realized

Since implementation, Pragati have reaped the rewards of the automated workflow. With the reduction of costly errors, time saved on data entry and the speed and efficiency of having Metrix plan the impositions the ROI has been achieved in just a few months.

Before the implementation of Metrix, communication errors used to occur resulting in incorrect impositions being planned that simply would not work on the folding or stitching equipment. Incorrect gaps meant that at 16 page signature would sometimes have to be cut into two 8 page signatures and folded separately. While this would happen less than 1% of the time it was fairly significant as the majority of the work was short run with an average run of just 1500. Metrix has eliminated this as it has knowledge of the plant equipment stored in its database and always respects the parameters and limitations when planning a job, and thus time and effort is reduced.

There is also a great deal of savings in time and effort to create the imposition with Metrix when compared with creating it by hand drawing. Previously Excel was used for pre-drawn standard templates which helped to speed up the process where gaps would simply have to be typed into the template. But for non standard impositions the planners would have to start from scratch. This is significantly faster now with Metrix.



Summary

Overall the process has achieved its goals and with continual development an implementation, gains will continue to be realised. The increased speed, clearer printouts of layouts for the operators, availability of old order imposition diagrams in the database, etc. are all benefits that makes management of operations easier.